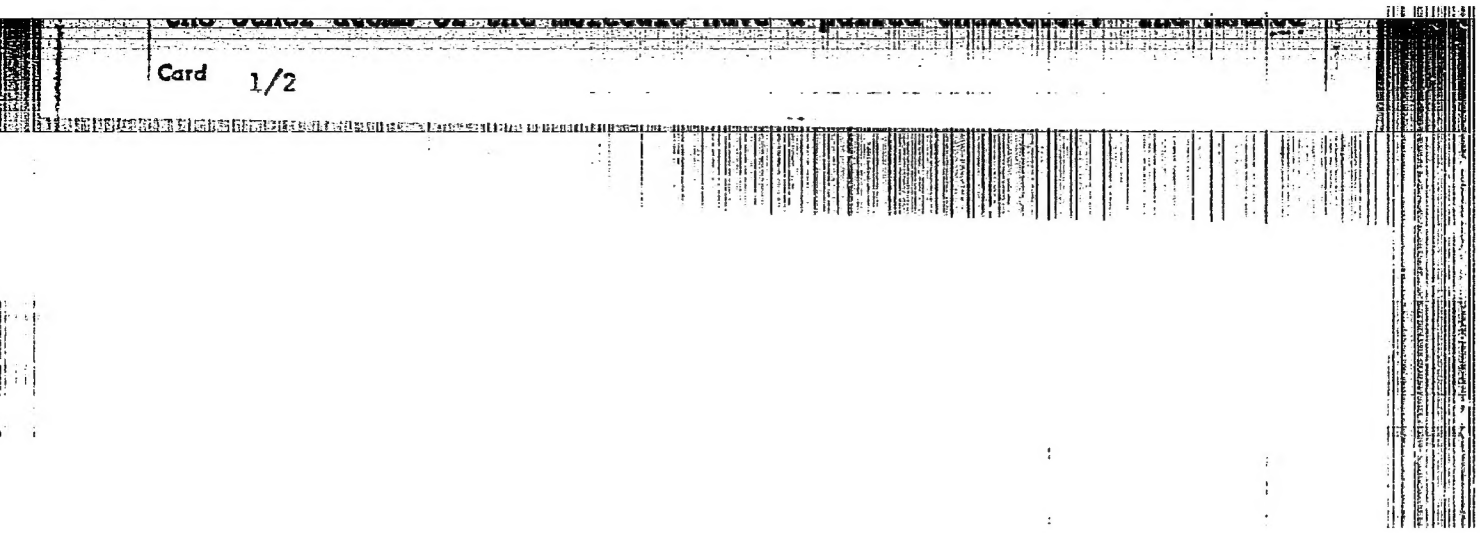

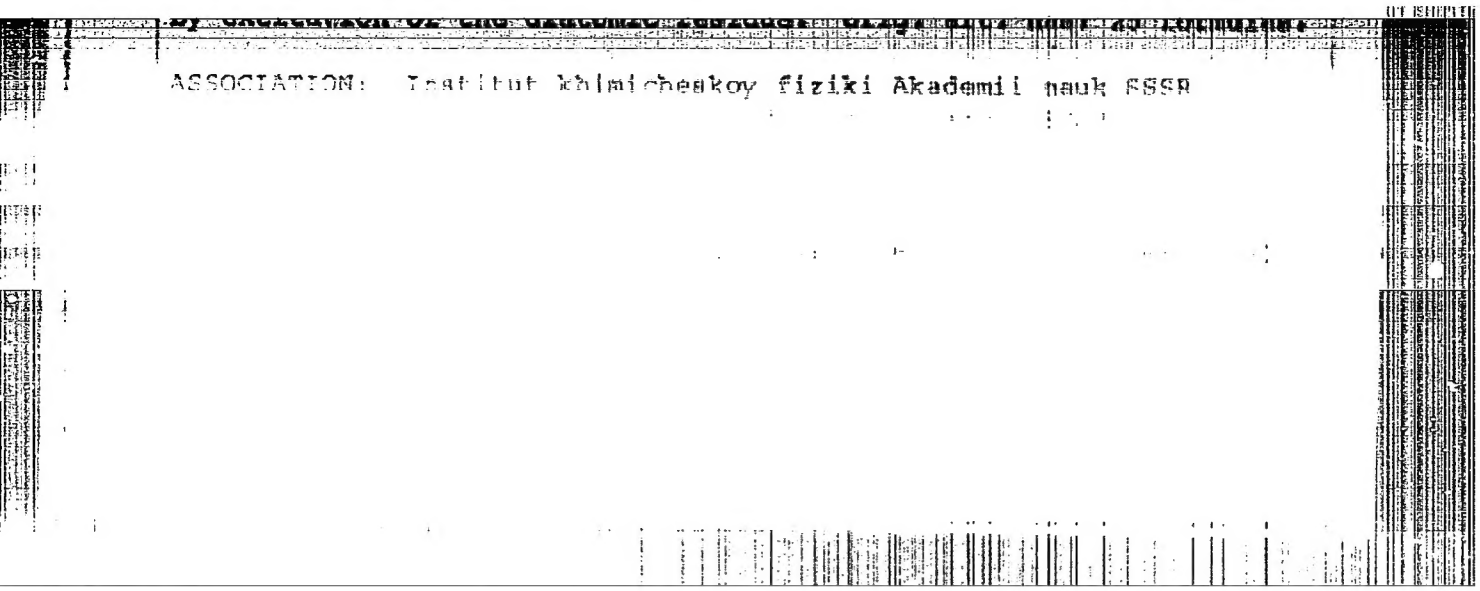

IVANOV, G.K.; SAYASOV, Yu.S.

Theory of molecular transformations induced by neutrons. Zhur. eksp. i teor. fiz. 47 no.4:1405-1414 O '64.
(MIRA 18:1)

1. Institut khimicheskoy fiziki AN SSSR.

L 06600-67 EWP(j)/EWT(1)/EWT(m) RM/GD
ACC NR: AT6017649 (A) SOURCE CODE: UR/0000/65/000/000/0298/0306

AUTHOR: Ivanov, G. K.; Sayasov, Yu. S.

ORG: none

TITLE: Possibilities of the method of molecular neutron spectroscopy

SOURCE: AN SSSR. Institut geokhimii i analiticheskoy khimii, Yadernaya khimiya (Nuclear chemistry). Moscow, Izd-vo Nauka, 1965, 298-306

TOPIC TAGS: neutron spectroscopy, neutron cross section, neutron energy distribution, molecular structure, neutron scattering

ABSTRACT: The article discusses in detail several new possibilities of the method of neutron spectroscopy using neutrons with energies of the order of the energies of the chemical bond (E_0 ~1 to 10 electron-volts). These possibilities are based on earlier results obtained by the authors (*ZhETF*, 1961, 40, 513; 1963, 44, 573; 1963, 45, 1456) and are in addition to the possibility of measuring the spectra of energy and angular distributions of scattered neutrons with the required accuracy. The applicability of neutron spectroscopy for investigating the structure and properties of molecules was proposed by V. I. Gol'danskiy (*ZhETF*, 1956, 41, 717). The authors discuss the problem of determining other molecular parameters, such as the force terms, frequencies of oscillation, constants of interaction, diagonal terms, bonds, intramolecular distances,

Card 1/2

L 06600-67

ACC NR: AT6017649

and other factors descriptive of molecular phenomena in such molecules as N_2O, CO_2, NH_3, PH_3, C_2H_6, CH_3OH, and other hydrocarbons. These quantities are determined from knowledge of the cross sections of neutrons colliding with molecules and other pertinent information, such as neutron energies, basic theoretical and experimental relations, etc. It is concluded that various molecular effects, such as ionic bonds, can be profitably studied by extension of the method of neutron spectroscopy. Orig. art. has: 9 formulas.

SUB CODE: 20,07,14/ SUBM DATE: 03Nov65/ ORIG REF: 006/ OTH REF: 004

Card 2/2 mjf

L 23735-66 EWT(1) IJP(c) AT
ACC NR: AP6006800 SOURCE CODE: UR/0386/66/003/001/0040/0044

AUTHORS: Ivanov, G. K.; Sayasov, Yu. S.

ORG: Institute of Chemical Physics, Academy of Sciences, SSSR (Institut khimicheskoy fiziki Akademii nauk SSSR)

TITLE: Direct atomic-molecular or ionic-molecular reactions

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 3, no. 1, 1966, 40-44

TOPIC TAGS: ion interaction, molecular interaction, particle interaction, differential cross section, argon, hydrogen, deuterium

ABSTRACT: The authors point out that several recent experiments by various investigators on ion-molecular reactions of the type A + BC → AB + C(A = atom or ion, BC = diatomic molecule or ion) cannot be interpreted on the basis of theories involving the use of the intermediate-state concept, since the relative-motion energy in these experiments was close to 10 eV, at which such theories are not valid. They therefore present the results of theoretical calculations using

Card 1/2

L 23735-66
ACC NR: AP6006800

the model of direct interactions between the incident particles A and the bound particles B and C, without formation of an intermediate state. Results of an earlier paper by the authors (ZhETF v. 45, 1456, 1963) are used to calculate the differential cross section for the production of a bound state AB with given energy and emission of a particle C into a given solid angle, on the assumption that the interaction potential is additive in the reference system of the particles, and the effective time of the paired interaction between particle A and particle B or C is small compared with the period of the molecular oscillations. The final formulas obtained for the cross section are compared with the results of experimental data on the reactions $Ar^+ + H_2 \rightarrow ArH^+ + H$ and $Ar^4 + D_2 \rightarrow ArD^+ + D$, $Ar + HD^+ \rightarrow ArH^+ + D$, and other reactions between argon atoms and hydrogen or deuterium ions and argon ions and hydrogen and deuterium atoms and are found to be in reasonable agreement. Orig. art. has: 1 figure and 4 formulas.

SUB CODE: 20/ SUBM DATE: 16Nov65/ ORIG REF: 002/ OTH REF: 006

Card 2/2 LW

L 24393-66 EWT(m)/EPF(n)-2/EWA(h)

ACC NR: AP6010995 SOURCE CODE: UR/0056/66/050/003/0726/0737

AUTHOR: Ivanov, G. K.

ORG: Institute of Chemical Physics Academy of Sciences SSR (Institut khimicheskoy fiziki Akademii nauk SSSR)

TITLE: On elastic and quasielastic scattering of neutrons by molecules

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 50, no. 3, 1966, 726-737

TOPIC TAGS: elastic scattering, neutron scattering, molecular interaction, small angle scattering, potential scattering

ABSTRACT: The purpose of the investigation was to investigate theoretically the scattering of neutrons by molecules at relatively small energy and momentum transfers, where the principal role is played by elastic processes or transitions between neighboring rotational energy levels. The distance between the rotational levels of the molecule is assumed to be much lower than the energy of its thermal excitation. A

Card 1/2

ACC NR: AP6010995

quasiclassical representation of the rotational wave functions is used to calculate the cross sections for the scattering of the neutrons by the molecules for this case. Such an approach simplifies the calculations and involves the assumption that the molecules rotate quasiclassically in the initial and in the final states. Separate calculations are made for diatomic and linear monoatomic molecules, for molecules of the spherical-type and for molecules and molecular groups having a preferred rotation axis. The case of the constrained internal rotation of molecules is also considered. It is shown that the constraining potentials can be determined from the dependence of the quasielastic cross section on the energy transfer, and some conclusions can be drawn concerning the shape of the potentials at certain temperatures. The author thanks Yu. S. Sayasov for interest in the work and for a discussion of the results. Orig. art. has: 2 figures and 41 formulas.

SUB CODE: 20/ SUBM DATE: 010ct65/ ORIG REF: 002/ OTH REF: 010

Card 2/2 UVR

L 14680-66 EWT(m)/EPF(n)-2/EWA(h) DM
ACC NR: AP6008258 SOURCE CODE: UR/0089/65/019/002/0183/0184

AUTHOR: Ivanov, G. K.; Sayasov, Yu. S.

ORG: none

TITLE: Resonance neutron-molecule interactions 19,55,44

SOURCE: Atomnaya energiya, v. 19, no. 2, 1965, 183-184

TOPIC TAGS: nuclear resonance, neutron scattering, neutron absorption, neutron interaction, gas, molecule, chloride

ABSTRACT: Cross sections of neutron resonance scattering and absorption by nuclei in molecules were estimated considering that the molecules are free. The obtained formulas hold for molecular gases. However, they also can be used for molecular liquids and crystals, in the case, in which the molecular interactions described by delayed rotation frequencies are smaller in comparison to the molecular oscillation frequencies. Ordinarily such conditions are observed in heavy molecules. The energy dependence of the total cross section was computed for chloride molecules with resonance parameters $\Gamma = 0.8$ ev and $E_0 = 4300$ ev (Γ is the resonance level width and E_0 is the resonance energy). Orig. art. has: 9 formulas. [NA]

SUB CODE: 20 / SUBM DATE: 26Oct64 / ORIG REF: 005 / OTH REF: 001

Card 1/1 UDC: 539.172.4

ACC NR: AP6035124 SOURCE CODE: UR/0053/66/090/001/0047/0084

AUTHOR: Ivanov, G. K.; Sayasov, Yu. S.

ORG: Institute of Chemical Physics, AN SSSR (Institut khimicheskoy fiziki AN SSSR)

TITLE: Interaction of neutrons with molecules

SOURCE: Uspekhi fizicheskikh nauk, v. 90, no. 1, 1966, 47-84

TOPIC TAGS: neutron interaction, molecular interaction, molecular structure, fast neutron, neutron spectrum, neutron scattering, scattering amplitude

ABSTRACT: This is a review article devoted essentially to a systematic development of the theory of scattering of fast neutrons by molecules, with special application to the determination of the properties and structure of molecules by means of the fast-neutron spectra. It is based essentially on earlier papers by the authors (Atomnaya energiya v. 19, 183, 1965 and preceding papers). The exposition is limited to the study of spectra of neutron scattering by molecules, and does not include phenomena of chemical transformations under the influence of neutrons. The survey also presents the theory of scattering of slow neutrons by molecules. Since the scattering amplitudes of fast neutrons depend strongly on the energy and exhibit resonances, the theory is presented from the very outset for the general case of variable amplitudes for neutron-nucleus scattering, using the formalism of the impulse approximation, which is itself described in some detail. A classification of the processes of scattering of neutrons by chemically bound nuclei, as a function of the character of the neutron-

Card 1/2 UDC: 539.121.7 - 539.125.5

ACC NR: AP6035124

nucleus interaction and of the neutron energy, is presented. The section headings are: I. The impulse approximation method as applied to the scattering of neutrons by chemically bound nuclei (1. Cross sections for molecular transitions under the influence of neutrons in the impulse approximation. 2. Presentation of the cross sections for scattering and absorption of neutrons as averages over the initial state of the molecules). II. Scattering of slow neutrons (3. General formulas for slow neutron scattering cross sections with classical treatment of rotational transitions of the molecule. 4. Scattering of neutrons with energies less than the energy for excitation of molecular vibrations. 5. Scattering of neutrons accompanied by vibrational excitation of the molecule). III. Scattering of fast neutrons (6. Approximation by free particles with a momentum spread. 7. The case of potential neutron-nucleus scattering. 8. Case of variable neutron-nucleus scattering amplitudes). Orig. art. has: 7 figures, 93 formulas, and 1 table.

SUB CODE: 20/ SUBM DATE: 00/ ORIG REF: 027/ OTH REF: 049

Card 2/2

IVANOV, G.K.; SAYASOV, Yu.S.

Theory of the vibrational excitation of molecules in the impulse approximation. Dokl. AN SSSR 154 no.6:1314-1317 F '64. (MIRA 17:2)

1. Institut khimicheskoy fiziki AN SSSR. Predstavleno akademikom V.N. Kondrat'yevym.

IVANOV, G.K.; SAYASOV, Yu.S.

Scattering theory in the impulse approximation. Zhur. eksp. i teor. fiz. 45 no.5:1456-1466 N '63. (MIRA 17:1)

1. Institut khimicheskoy fiziki AN SSSR.

ACCESSION NR: AP4019971 S/0020/64/154/006/1314/1317

AUTHOR: Ivanov, G. K.; Sayasov, Yu. S.

TITLE: Theory of vibrational excitation of molecules in the momentum approximation

SOURCE: AN SSSR. Doklady*, v. 154, no. 6, 1964, 1314-1317

TOPIC TAGS: vibrational molecular excitation, momentum approximation, collision excitation, excitation temperature dependence, vibrational relaxation, molecular vibrational transition

ABSTRACT: The general theory of scattering in the momentum approximation was developed by the authors in a previous paper (Zh ETF 45, no. 5 (1963)) as a new formulation of the method suggested by G. Chew (Phys. Rev. 80, 196 (1950)). It can be used for the computation of the probabilities of vibrational transitions in molecules which correspond to small frequencies. The subject of the present paper is the reformulation of the method for this purpose. Formulas are derived for the cross sections for the excitation by a collision with an atom.

Card 1/2

ACCESSION NR: AP4019971

The time of the vibrational relaxation is found to have a minimum which, in the case of I_2 + He, is at 210OK. The theory developed for diatomic molecules should be, in principle, applicable to polyatomic molecules. The results are compared with those of other authors.
"The authors are grateful to V. N. Kondrat'yev for a discussion."

ASSOCIATION: Institut khimicheskoy fiziki Akademii Nauk SSSR (Institute for Chemical Physics, Academy of Sciences SSSR)

SUBMITTED: 05Sep63 DATE ACQ: 07Feb64 ENCL: 00

SUB CODE: PH NO REF SOV: 002 OTHER: 003

Card 2/2

IVANOV, G.K.

Photoelectric method of registration of results of investigation. Klin. med., Moskva 29 no.11:88-89 Nov 1951. (CIML 21:2)

1. Of the Faculty Therapy Staff (Head -- Prof. G. D. Zalesskiy), Novosibirsk Medical Institute.

IVANOV, G.K.

Prevention of air embolism in intravascular transfusions. Vest. khir. 71 no.3:53-54 1951. (CIML 20:11)

1. Of the Department of Faculty Therapy, Novosibirsk State Medical Institute (Head — G.D. Zalesskiy).

IVANOV, G.K. (Novosibirsk)

Universal compass for measuring electrocardiographic indexes. Klin. med. 34 no.10:74-78 O '56. (MLRA 10:1)

1. Iz kafedry fakul'tetskoy terapii (zav. - prof. G.D.Zalesskiy) Novosibirskogo meditsinskogo instituta.

(ELECTROCARDIOGRAPHY, appar. and instruments universal compass for measurements of electrocardiographic indexes)

USSR / General Problems of Pathology. Pathological Physiology of Infectious Processes. U-3

Abs Jour : Ref Zhur - Biol., No 17, 1958, No 80265

Author : Ivanov, G. K.
Inst : Not given
Title : Cardiotoxic Properties of Blood Serum of Rheumatic Patients.

Orig Pub : Tr. Novosibirskogo med. in-ta, 1957, 27, 166-176.

Abstract : The intravenous introduction in rabbits of 2-4 ml/kg of the serum of healthy and rhtumatic patients (RP) caused a shock reaction which was sometimes fatal. The reaction was accompanied by changes of the EGG in the form of rhythm impairments, deformation of the complex RS, changes of the form of T wave; and sometimes fibrillation of the ventricles with their subsequent stoppage occurred. Through 12 hours after coagulation, the serum taken from healthy and RP in the period between attacks lost the cardiotoxic properties;

Card 1/2

Chair of Faculty Therapy, Novosibirsk Med. Inst.

SAYASOV, Yu.S.; IVANOV, G.K.

Theory of molecular diasociation induced by nautrons. Part 1:. Diatomic molecules. Zhur. eksp. i teor. fiz. 40 no.2:513-523 F '61. (MIRA 14:7)

1. Institut khimicheskoy fiziki AN SSSR.
(Particles (Nuclear physics))
(Molecules)

IVANOV, G.K.

Neutron scattering by molecules. Atom. energ. 12 no.1:49-51 Ja '62. (MIRA 15:1)
(Neutrons--Scattering)

IVANOV, G. L.

USSR/Engineering - Broaching

Card 1/1 : Pub. 12 - 7/14

Authors : Ivanov, G. L.

Title : Semi-automatic broaching of differential side-gear teeth

Periodical : Avt. trakt. prom. 5, 23-24, May 1954

Abstract : A narrative report is presented concerning broaching of differential side-gear teeth on a vertical-type semi-automatic broaching-machine. A general description of the broaching operation is given, together with diagrams depicting the disposition of individual machine components.

Institution : .....

Submitted : .....

IVANOV, G., inzhener.

Sound signaler in drilling prospecting boreholes. Mast.uglia 5 no.1:18-19 Ja '56. (MLRA 9:5)
(Boring Machinery) (Prospecting)

IVANOV, G. inzhener

Disconnecting swith for a boring drill. Mast ugl. 4 no.1:19 Ja '55. (MLRA 8:6)

(Boring machinery)

IVANOV, G. inzhener

Device for the manufacture of pump cups. Mast. ugl. 4 no.3:23 Mr '55. (MLRA 8:6)

(Mine pumps)

KRUPSKIY, A.S.; IVANOV, G.M., kandidat tekhnicheskikh nauk, redaktor.

[Project work for course credit and for the diploma in construction engineering technical schools; industrial and public building construction] Kursovoe i diplomnoe proektirovanie v stroitel'nykh tekhnikumakh; promyshlennoe i grazhdanskoe stroitel'stvo. Leningrad, Gos. izd-vo lit-ry po stroitel'stvu i arkhitekture, 1952. 150 p. (MLRA 7:4)
(Building--Problems, exercises, etc.) (Architecture--Designs and plans)

USSR/Farm Animals. - Cattle Q-2

Abs Jour : Ref Zhur - Biol., No 6, 1958, No 26145

Author : Ivanov G.M.
Inst : Not Given
Title : The Composition of the Milk of the Hybrid Cows Resulted from the Crossing of the Local Cattle and the Kholmogory Breed (Sostav moloka korov-pomessoy mestnogo skota s kholmogorskoy porodoy)

Orig Pub : Tr. Komi fil. AN SSSR, 1956, No 4, 84-89

Abstract : The milk of 6 hybrid cows of the I-III generations studied during a period of full lactation is characterized by the following mean indexes: (in %): butterfat 3.76; protein 3.87; lactic sugar 4.83; ash 0.71; Ca 0.128; P 0.09; dry substance 12.95; density of the milk 31°; size of the butterfat globules 3.17μ.

Card : 1/1

MAKEYEV, O.V., prof., otv. red.; TOKOYOY, N.A., prof., red.; YEFIMOV, N.V., dots., red.; BAKHANOVA, S.G., red.; IVANOV, G.M., red.

[Biological role of microelements in the organism of man and animals in eastern Siberia and the Far East; transactions of the conference in Ula-Ude in February of 1962] Biologicheskaia rol' mikroelementov v organizme cheloveka i zhivotnykh Vostochnoi Sibiri i Dal'nego Vostoka; trudy konferentsii, g. Ulan-Ude, fevral' 1962 g. Ulan-Ude, Buriatskii kompleksnyi nauchno-issl. in-t, 1963. 162 p. (MIRA 18:1)

1. Buryatskiy kompleksnyy nauchno-issledovatel'skiy institut (for Yefimov, Bakhanova).

KUNITSKIY, Nikolay Petrovich, kand.tekhn.nauk, dotsent; IVANOV, Geliy Mikhaylovich, starshiy nauchnyy sotrudnik

Transient processes in an ionic generator excitation system. Izv. vys. ucheb. zav.; elektromekh. 3 no.12:3-13 '60. (MIRA 14:5)

1. Kafedra elektrifikatsii promyshlennykh predpriyatiy Vsesoyuznogo zaochnogo politekhnicheskogo institùta (for Kunitskiy). 2. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii (for Ivanov).

(Electric generators)
(Magnetic amplifiers)
(Electric current rectifiers)

20706

9.4200

S/120/61/000/001/044/062
E194/E184

AUTHORS: Smirnov, S.A., and Ivanov, G.M.

TITLE: A Water Load for High Power, High Voltage Impulse Modulators

PERIODICAL: Pribory i tekhnika eksperimenta, 1961,No.1,pp.145-147

TEXT: When testing large klystrons and magnetrons an active resistance load is often required. This resistance should have low stray inductance and capacitance; wire resistors are not very satisfactory and the best results can be obtained by using a column of flowing water. In designing a water loading resistance it is necessary to have information about the electric strength of water under impulse conditions, and the variation of resistance with temperature. Not enough information has been published about this. Accordingly, measurements were made of the conductivity and electric strength of a column of flowing water contained in a smooth cylindrical tube of porcelain, vinylplast or glass and flat smooth cylindrical electrodes. The measurements were made over the voltage range of 30 to 350 kV with an impulse length of 3.0 microseconds to half value. The source of voltage was the

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S/120/61/000/001/044/062
E194/E184

A Water Load for High Power, High Voltage Impulse Modulators

modulator for an impulse klystron amplifier. The impulse wave shape was measured on oscillographs with capacitative voltage dividers with an error of ± 10%. Under these conditions water is found to break down over the inner surfaces of the solid dielectrics. Fig.1 shows the relationship between the breakdown voltage of water and the length of the surface of the dielectrics using a variety of electrode metals and solid dielectrics. For surface lengths up to 10 cm the breakdown voltage gradient is about 30 kg/cm. The breakdown gradient is practically independent of the material from which the electrodes or insulating cylinders are made. The relationship between specific resistance of water and temperature is shown in Fig.2. From the data given in Figs.1 and 2 it is possible to design a load resistance. For the majority of practical cases the value of load resistance may be calculated by determining the resistances corresponding to the inlet and outlet temperatures and taking the mean. Fig.3 shows the construction of a loading resistance designed for a voltage of 350 kV and a current of 200 A with a pulse duration of

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20706

S/120/61/000/001/044/062
E194/E184

A Water Load for High Power, High Voltage Impulse Modulators

3 microseconds and repetition frequency of 50 c/s. The upper flange is earthed and the high voltage is applied to the lower flange. Prolonged operation of the loading resistances under rated conditions has shown that the design is reliable and gives good service life of 500 hours without major overhaul. The main advantages of a water loading resistance are obtained only if the water used has a specific resistance of the order of several thousands of ohms per cm. The characteristics given above were obtained with such water.

Acknowledgements are expressed to P.G. Gurtovenko for making the drawings.

There are 3 figures and 4 references: 2 Soviet and 2 non-Soviet.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN USSR
(Physico-technical Institute, AS Ukr.SSR)

SUBMITTED: February 12, 1960

Card 3/5

IVANOV, G.M.

Analysis of the effect of the parameters of a static phase controller on its phase angle conversion range. Izv. vys. ucheb. zav.; energ. 5 no.10:33-40 O '62. (MIRA 15:11)

1. Vsesoyuznyy zaochnyy politekhnicheskiy institut.
(Phase converters)

KUNITSKIY, Nikolay Petrovich, doktor tekhn.nauk, dotsent; IVANOV, Geliy Mikhaylovich, aspirant

Selection of the parameters of a static phase regulator. Izv.vys. uchab.zav.; elektromekh. 5 no.10:1145-1159 '62. (MIRA 15:11)

1. Kafedra elektrooborudovaniya promyshlennykh predpriyatiy Vsesoyuznogo zaochnogo politekhnicheskogo instituta (for Kunitskiy). 2. Vsesoyuznyy zaochnyy politekhnicheskiy institut (for Ivanov).

(Phase converters) (Mercury-arc rectifiers)

KUNITSKIY, N.P.; IVANOV, G.M.

Current regulator in the electric drive of a reversive rolling mill with electronic generator excitation. Izv. vys. ucheb. zav.; elektromekh. 7 no.6:714-723 '64. (MIRA 17:7)

KUNITSKIY, N.P., doktor tekhn.nauk; IVANOV, G.M., kand.tekhn.nauk; KONONOV, N.G., inzh.

Transient processes in systems with reversive ionic electric drives. Elektrichestvo no.11:33-37 N '64.

(MIRA 18:2)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii imeni Bardina.

ACCESSION NR: AP4043618 S/0056/64/047/002/0473/0475

AUTHORS: Yurasova, V. Ye.; Brzhezinskiy, V. A.; Ivanov, G. M.

TITLE: Anisotropy of reflection of argon ions from single crystal copper

SOURCE: Zh. eksper. i teor. fiz., v. 47, no. 2, 1964, 473-475

TOPIC TAGS: argon, copper, anisotropy, crystal lattice structure, single crystal, cubic crystal, ion bombardment

ABSTRACT: This investigation was undertaken to check on an earlier grapho-analytic calculation made by one of the authors (V. Ye. Yurasova, Izv. AN SSSR, seriya fiz., v. 28, 9, 1964). According to this calculation, the projections of the reflected-ion-yield maxima on the (100) plane should lie symmetrically on both sides of each of the close-packing directions [110] and [100] in that plane, and the angular separation between them should be ~45°; the reflection

Card 1/4

ACCESSION NR: AP4043618

minima should correspond to the directions [110] and [100]. To check this hypothesis, the angular distribution was investigated of the ions reflected following bombardment of a (100) surface of a copper single crystal with argon ions at ~1.5 keV energy. The test setup is briefly described. The results have shown that the regularity of the crystal lattice influences the intensity of the ion reflection. The minimum of the reflection is observed in the direction of close atomic packing [110] and [100], with the ion reflection having a maximum between these two directions. The results obtained are in good agreement with the conclusions of the earlier grapho-analytic calculations and can be interpreted by assuming that the ions penetrate open channels along the close-packing directions in the face-centered cubic lattice. Orig. art. has: 2 figures.

ASSOCIATION: Moskovskiy gosudarstvenny*y universitet (Moscow State University)

Card 2/4

ACCESSION NR: AP4043618

SUBMITTED: 20Mar64 ENCL: 01

SUB CODE: NP, SS NR REF SOV: 001 OTHER: 006

Card 3/4

IVANOV, G. M.

PA 43/49T49

Oct 48

USSR/Engineering
Steam Boilers
Brittle Failure

"Caustic Brittleness of Metals in Steam Boilers," G. M. Ivanov, Engr, 5 pp

"Za Ekonomiyu Topliva" Vol V, No 10

Analysis of alkaline brittleness, which is evidenced in metal of steam boilers in the form of fissures around riveted seams or milled joints. Gives examples of damage caused by alkaline brittle ness, characteristics of fissures, conditions making possible the emergence of fissures, manifestations of damage due to alkaline brittleness on operating steam boilers, and passivation of alkaline aggressiveness of boiler water.

43/49T49

Oct 48

USSR/Engineering (Contd)

43/49T49

IVANOV, G. M.

"Collected Problems on Technical Mechanics," by M. P. Efremov, G. M. Ivanov and I. S. Shapiro, and authorized by the Administration for Higher Education of the Ministry of Manufacturing to be used as a textbook in Manufacturing Institutes. Published by the State Publishing House for Literature on Manufacturing and Architecture, Leningrad, 1953.

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(One of two cards)

IVANOV, G. M.

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Chapter XXIII. Details of Load-Lifting Machines. 230
Appendix. 237

The book gives problems on theoretical mechanics, resistance of materials, statics of constructions and machine parts and corresponds to the programs of courses confirmed for construction. The problems are explained and solutions are given.

SO: 38300

(One of two cards)

IVANOV, G.M.

LUNEV, V.I., inzhener; BYCHKOV, D.V., professor, doktor tekhnicheskikh nauk, redaktor; IVANOV, G.M., kandidat tekhnicheskikh nauk, retsenzent; SEMEVSKIY, V.V., kandidat tekhnicheskikh nauk, retsenzent [deceased]; AFANAS'YEV, A.M., kandidat tekhnicheskikh nauk, redaktor; TUMARKIN, D.M., inzhener, redaktor izdatel'stva; MEDVEDEV, L.Ya., tekhnicheskiy redaktor

[Technical mechanics] Tekhnicheskaia mekhanika. Pod obshchei red. D.V.Bychkova, Moskva, Gos. izd-vo lit-ry po stroit. i arkhitekture. Pt.2. [Resistance of materials] Soprotivlenie materialov. 1954. 226 p. (MLRA 7:9)

(Deformations (Mechanics))

BYCHKOV, D.V., doktor tekhn.nauk, prof.; MIROV, M.O.; LUNEV, Vasiliy Ivanovich, kand.tekhn.nauk, dots.; IVANOV, Grigoriy Mikhaylovich, kand.tekhn.nauk.; PAVLOV, B.P., prof., doktor tekhn.nauk, retsenzent; KOBETS, L.G., kand.tekhn.nauk, retsenzent; UDOVENKO, S.A., inzh., retsenzent; BOGOMOLOV, G.I., inzh., retsenzent; BORODINA, I.S., red. izd-va; KAPLAN, M.Ya., red.izd-va; PERSON, M.N., tekhn. red.; UL'KINA, Ye.A., tekhn.red.

[Engineering mechanics] Tekhnicheskaia mekhanika. Pod obshchei red. D.V.Bychkova. Moskva, Gos.izd-vo lit-ry po stroit. i arkhit. Pt.1. Bychkov, D.V., and M.O.Mirov [Theoretical mechanics] Teoreticheskaia mekhanika. Izd. 2-oe. 1957. 282 p. Pt.2. Lunev, V.I. [Resistance of materials] Soprotivlenie materialov. Izd. 2-oe, perer. 1957. 255 p. Pt.3. Ivanov, G.M. [Statics of structures] Statika sooruzhenii. 1957. 226 p. (MIRA 11:2)
(Mechanics, Applied) (Strength of materials)

KUNITSKIY, N.P.; IVANOV, G.M.

Transient processes in reversing-mill motors with ionic excitation of generators. Sbor. trud TSNIICHM no.30:39-57 '63. (MIRA 16:10)

(Rolling mills—Electric driving)

KUNITSKIY, N.P.; IVANOV, G.M.

Analysis of various operating conditions of the electric drive for live roll tables of the KMK blooming mill. Sbor. trud TSNIICHM no.30:102-107 '63. (MIRA 16:10)

(Rolling mills--Electric driving)

KUNITSKIY, N.P.; IVANOV, G.M.

Effect of various current patterns on the heating of motors of necessary mechanisms of reversing rolling mills. Sbor. trud TSNIICHM no.30:57-71 '63. (MIRA 16:10)

(Rolling mills--Electric driving)

KALINSKIY, D.N.; IVANOV, G.M.

Using magnetic amplifiers in excitation control circuits of blooming-mill motors. Sbor. trud TSNIICHM no.30:116-122 '63. (MIRA 16:10)

(Rolling mills—Electric driving)
(Magnetic amplifiers)

GRISHKOV, A.I.; FEDOROV, Yu.K.; LOKTIONOV, G.I.; IVANOV, G.M.

Investigating the coefficient of resistance to the movement of a strip along the roller table. [Sbor. trud.] TSNIICHM no.29:113-120 '63. (MIRA 17:4)

KOTOMINA, A.A., inzh.; IVANOV, G.N., inzh.; SHINKARENKO, P.A., inzh.

Aluminum anodizing. Mashinostroenie no.4:81-84 Jl-Ag '65. (MIRA 18:8)

IVANOV, G.N., inzh.; KOTYMINA, A.A., inzh.; SHINKARENKO, P.A., inzh.

Using a pyrophosphate electrolyte in yellow and white bronzing.
Mashinostroenie no.6:89-90 N-D '65.
(MIRA 18:12)

IVANOV, G.N.

Mechanical cable layer. Mash. i neft. obor. no.8:22-24 '65.
(MIRA 18:9)

1. Neftepromyslovoye upravleniye "Aksakovneft'".

IVANOV, G.N.

PGS-2 self-recording paraffin meter. Neftepром. delo no.8:29-31 '65. (MIRA 18:9)

1. TSekh nauchno-issledovatel'skikh i proizvodstvennykh rabot neftepromyslovogo upravleniya "Aksakovneft'".

IVANOV, G.N.; TRUFEYEV, A.P.

Controlling paraffin deposition by means of an electromagnetic field. Mash. i neft. obor. no. 11:21-22 '65 (MIRA 18:11)

1. Neftepromyslovoye upravleniye "Aksakovneft'".

IVANOV, G.N.; SKLYAROV, L.A.

Using the method of gas-flame spraying for applying plastic coatings on large articles. Mashinostroenie no.4:89-90 Jl-Ag '63. (MIRA 17:2)

TSARINNIKOV, V.V.; IVANOV, G.N.; ZHIVOTOVSKIY, A.F.

Ship furniture made of plastics. Plast.massy no.7:50-54 '60.(MIRA 13:10)
(Furniture) (Plastics)

IVANOV, Georgi N.

Underground amphitheater with 1000 seats for the Art and Vocation School in Paris. Tekhnika 10 no.9:40 '61.

(Amphitheaters)

IVANOV, G. N., inzh.

A system of garages for the uninterrupted circulation of automobiles. Tekhnika Bulg 11 no.2:78 '62.

ISANGULOV, K.I.; KAGAN, Ya.M.; IVANOV, G.N.; KAMALOV, R.R.

Using electric sinking pumps in wells with damaged production casing. Neftepром. delo no.4:11-12 '64. (MIRA 17:6)

1. Neftepromyslovoye upravleniye "Aksakovneft".

IVANOV, G.N.

Automatic control of a trap unit. Neftepром. delo no.8:31-34 '64. (MIRA 17:12)

1. TSekh nauchno-issledovatel'skikh i proizvodstvennykh rabot neftepromyslovogo upravleniya "Aksakovneft'".

IVANOV, G.N.; LOPATINSKIY, V.P.

Determination of the molecular weights of organic compounds using thermistors. Izv. TPI 126:84-86 '64. (MIRA 18:7)

L 05012-67 EWT(m) IJP(c)

ACC NR: AR6031250 SOURCE CODE: UR/0081/66/000/011/D043/D043

21
B

AUTHOR: Ivanov, G. N.; Budayeva, V. A.; Lopatinskiy, V. P.

TITLE: Determination of the molecular weight of organic compounds by electrical measuring circuits

SOURCE: Ref. zh. Khimiya, Part I, Abs. 11D75

REF SOURCE: Izv. Tomskogo politekhn. in-ta, no. 136, 1965, 106-109

TOPIC TAGS: molecular weight, organic compound, electric measurement

ABSTRACT: A simple and convenient diagram has been developed for determining the molecular weights of organic compounds with the use of thermistors as the thermosensitive elements. The method is characterized by high reproducibility, by rapid determination (15—20 min), by freedom from constant manual operations, and by high accuracy (1—3% relative error). One of the diagrams developed permits automation of the process for determining the molecular weight. Authors' summary. [Translation of abstract]

SUB CODE: 20/

Card 1/1 LC

IVANOV, G.O.

36349 Opyt zalozheniya postoyannykh probnykh ploshchadey (Lesnykh kul'tur) v krymskom zapovednike. Nauch-metod zapiski (Sovet ministrov rsfsr, glav. upr. po zapoved-nikam.) Vyp. 12, 1949, S. 71-73

SO: Letopis' Zhurnal'nykh Statey, No. 49, 1949

Ivanov, G.

K-4

USSR/Forestry - Forest Economy.

Abs Jour : Ref Zhur - Biol., No 3, 1958, 10589

Author : Ivanov, G.
Inst :
Title : Methods of Insuring Natural Reproduction of Oaks from Seed

Orig Pub : Zemledeliye i zhivotnovodstvo Moldavii, 1956, No 7, 68-72

Abstract : The reasons are given for the death of self-seeded oak saplings (in oak forests), and particularities of the development of self-seeding oaks after the forest has been cut down are described (Kupriyanovskoye and Orgeyevskoye Forest Economies, Moldayia). Oaks which sprout form seed under other fully-grown oak trees die out from lack of light and water. If the trees are thinned out (to a density of 0.6) and the underbrush removed, the shoots survive much better. A description is given of methods of cutting which ensure maximum preservation of seedlings on the lumbering area. In the author's opinion, normal natural

Card 1/2

Card 2/2

COUNTRY : USSR K
CATEGORY : Forestry. Forest Cultures.

ABS. JOUR. : RZhBiol., No. 14 1959, No. 63240

AUTHOR : Ivanov, G. C.
INST. : Crimean State Reservation
TITLE : Forest Thinning on Outcropping Clayey Shale in the Crimea

ORIG. PUB. : Tr. Krymsk. gos. zapovedn., 1957, 4, 73-96

ABSTRACT : Clayey shales which crop out on the surface are found both on the southern seacoast of the Crimea and at the foot of the northern slope of the main mountain chain. Brown mountain-forest soils are the predominant soil type on the clayey shales; here, depending on local conditions, low site-quality pine-juniper and oak-ash plantations, hornbeam-oak forests and oak forests, and others grow. The whole complex of strongly denuded forest brown soils, and weakly developed brown soils and shale exposures, is populated in a natural manner by pine. On slaty outcroppings and the soils associated with them, forest cultures have been established for the last 44 years, principally of Crimean

Card: 1/3

[Scrubby hornbeam - see note on 63210]

COUNTRY :
CATEGORY : X

BS. JOUR. : RZhBiol., No. 14, 1959, No. 63240

AUTHOR :
INST. :
TITLE :

PUB. PUB. :

ABSTRACT : on the agrotechny of cultures on areas of varying steepness are presented, using mechanization and explosives.--I. A. Bashkirov

Card: 3/3

USSR / Forestry. Forest Crops. K-3

Abs Jour: Ref Zhur-Biol., No 6, 1958, 24917.

Author : Ivanov, G. O.
Inst : Not given.
Title : Experiments in Afforestation of the Crimean Upland (Yayl).

Orig Pub: Tr. Krymsk. gos. zapovedn., 1957, 4, No 97 - 106.

Abstract: No abstract.

Card 1/1

IVANOV, G. P., LYUBOV, B. Ya.

Heat - Radiation and Absorption

Heating a motionless layer speheres with a stream of hot gas. Dokl. AN SSSR 86 no. 2, 1952.

Monthly List of Russian Accessions, Library of Congress, December 1952. Unclassified.

ABELEVICH, A.A.; ARTEM'YEV, Yu.N.; VLASOV, A.P.; GAL'PERIN, A.S.; YEVSIKOV, A.V.; IVANOV, G.P.; KOROLEV, N.A.; LEVITSKIY, I.S.; LIVSHITS, L.G.; MELKOV, M.P.; NAZAROV, N.I.; NOVIKOV, M.P.; POPOV, V.Ya.; TEPLOV, A.G.; BAKHAREV, A.P., inzh., retsenzent; SAVEL'YEV, Ye.Ya., red. izd-va; MODEL', B.I., tekhn. red.; EL'KIND, V.D., tekhn. red.

[Technological aspects of the repair of crauler vehicles] Tekhnologiia remonta gusenichnykh mashin. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry 1960. 466 p. (MIRA 14:7)
(Crauler vehicles--Maintenance and repair)

OLESYUK, Denis Ivanovich; IVANOV, Georgiy Petrovich; SHERIKH, M.D., otv. red.; MAZURKEVICH, M., red.izd-va; LEBEDEV, A., tekhn. red.

[Special features of the work analysis of supply and sale organizations]Osobennosti analiza raboty snabzhenchesko-sbytovykh organizatsii. Moskva, Gosfinizdat, 1962. 65 p. (MIRA 16:3)
(Industrial procurement--Auditing and inspection)

MALINOVSKIY, V.A., prof., doktor tekhn.nauk; IVANCHENKO, O.Ya., inzh.;
IVANOV, G.P., inzh.

Flotation and gravitation method of high-sulfur coal preparation.
Obog.i brik. ugl. no.21:66-74 '61. (MIRA 16:5)
(Coal preparation)

IVANOV, Georgiy Petrovich; GUSARCHUK, D.M., red.; MYAKUSHKO, V.P., red.izd-va; SHIBAKOVA, P.Ye., tekhn. red.

[Recent developments in the technology of the Antropovo Logging Camp; practices in the biological drying of the wood of hardwood species] Novoe v tekhnologii Antropovskogo lespromkhoza; iz opyta biologicheskoi sushki drevesiny listvennykh porod. Moskva, Goslesbumizdat, 1962. 34 p. (MIRA 17:4)

IVANOV, G.P.

Elektroiskrovoe uprochnenie rezhushchikh instrumentov (Electric spark hardening of cutting tools). Moskva, ITEIN, 1951. 70 p.

SO: Monthly List of Russian Accessions, Vol. 6, No. 1, April 1953

IVANOV, G. F. -- "Investigation of Electric-Spark Hardening of Cutting Tools and Machine Parts." Sub 29 Dec 52, Central Sci Res Inst of Technology and Machine Building (TsNIITMASH) (Dissertation for the Degree of Candidate in Technical Sciences)

SO: Vechernaya Moskva, January-December 1952

IVANOV, G.K.

Met 3/2

Journal of the Iron and Steel Institute
Vol. 176 Part 3
Mar. 1954
Protective Coatings

Electric Spark Hardening of Metallic Articles. G. P. Ivanov and N. D. Titov. (*Liteinoe Proizvodstvo*, 1953, 8, 1, 21–22). [In Russian]. The Ivanov electric metallizing machine and its use for depositing hard materials on steel or cast iron surfaces are described. From a primary voltage of 220 a pulsating and adjustable secondary voltage produces a spark which carries particles of the hard material (anode) on to the article (cathode). The hardness of the deposited layer is enhanced by the nitriding of the particles as they pass through atmospheric nitrogen, ionized by the spark. The high temperature of the spark also favours diffusion and leads to firm adhesion of the deposited layer. Photomicrographs of treated surfaces are shown.—S. K.

USSR/ Engineering - Metal hardening

Card 1/1 : Pub. 128 - 17/31

Authors : Ivanov, G. P.

Title : Electric-spark casehardening of machine parts with the IE-2 apparatus

Periodical : Vest. mash. 10, 72 - 75, Oct 54

Abstract : A description is presented of an electric-spark apparatus, Type IE-2, for casehardening of machine parts and cutting tools. Illustration and diagrams depicting the above mentioned apparatus are given, together with technical specifications. Table; graphs.

Institution : The Central Scientific-Investigational Institute for Machine Technology

Submitted : ....

Ivanov, G. P.

USSR/Solid State Physics - Mechanical Properties of Crystals and Polycrystalline Compounds, E-9

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 34889

Author: Ivanov, G. P., Belyanin, V. A., Borisova, V. V.

Institution: None

Title: Effect of Annealing on Hardness of Surface Layer Strengthened by the Electric-Spark Method

Original Periodical: Metallovedeniye i obrabotka metallov, 1955, No 4, 48-51

Abstract: The annealing stability of reinforced layers, obtained on specimens made of 45 steel by electric-spark processing using the IE-2M apparatus was determined (Ivanov, G. P., Vest. Mashinostroyeniya, 1954, No 10). The electrodes used were: hard T15K6 alloy, ferrochrome, ferroboron, tungsten, chromium, and nitrided chromium (4% N). The microhardness of the reinforced layer was determined prior to annealing using metallographic sections and the PMT-3 instrument with a loading of 50 g. The layers having the highest microhardness were those obtained with

Card 1/2

USSR/Solid State Physics - Mechanical Properties of Crystals and Polycrystalline Compounds, E-9

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 34889

Abstract: the T15K6-alloy electrodes (1,260 kg/sq mm and those of ferroboron (1,000 kg/sq mm). All specimen were broken up into groups and subjected to annealing at 300, 500, 700, and 800 degrees for 2 hours. Curves are given for the variation of the microhardness of the layers obtained with various electrodes vs the annealing temperature.

Card 2/2

IVANOV, G.P., kandidat tekhnicheskikh nauk; SAVUKOV, V.P., inshener.

Effect of electric spark hardening on wear resistance and fatigue strength. Metalloved.i obr.met. no.6:52-56 D '55. (MLRA 9:3)

1. TSentral'nyy nauchno-issledovatel'skiy institut tekhnologii i mashinostroyeniya.
(Steel--Electrometallurgy) (Electric spark)

NOVIKOV, Vladimir Nikolayevich; IVANOV, Georgiy Petrovich; SAVUKOV, Vladimir Pavlovich; BERESTOVOY, Ye.I., inzhener, redaktor; BOBROVA, Ye.N., tekhnicheskiy redaktor

[Electric spark hardening of locomotive parts; practices of the Moscow depot of the Moscow-Kursk-Donbass railroad] Elektroiskrovoe uprochnenie detalei parovozov; opyt depo Moskva Moskovsko-Kursko-Donbasskoi dorogi. Moskva, Gos.transp.zhel-dor.izd-vo, 1957. 50 p. (MLRA 10:7)

(Locomotives--Repairs) (Electric spark)

Ivanov, Georgiy Petrovich

PHASE I BOOK EXPLOITATION 29

Ivanov, Georgiy Petrovich, Candidate of Technical Sciences

Tekhnologiya elektroiskrovogo uprochneniya instrumentov i detaley mashin (Technology of Electric Spark Hardening of Tools and Machine Parts) Moscow, Mashgiz, 1957. 187 p. 7,000 copies printed.

Reviewer: Popilov, L. Ya., Engineer; Ed.: Astaf'yev, S. S., Candidate of Technical Sciences; Technical Ed.: Uvarova, A. F., Managing Ed. for literature on transport, highway and power machine building (Mashgiz): Voskresenskiy, N. N., Engineer.

PURPOSE: This monograph is intended for engineers, technicians, foremen, and electrotechnologists employed in machinery plants.

COVERAGE: The book 1) explains the basic problems of electro-spark hardening (nature of process, technology, and the hardening technique), 2) describes new electro-spark equipment developed by TsNIITMASH (Central Scientific Research Institute for Heavy Machine Building), 3) presents the

Card 1/7

theoretical, physical and metallographic principles of electro-spark hardening, and 4) on the basis of numerous experiments determines the special physical properties and describes mechanical tests of hardened specimens. Furthermore, the book introduces electro-spark hardening technology developed on the basis of physical parameters of the process, describes the practical application of the technology to hardening of tools and machine parts, and explains full-scale testing of various hardened machine parts. Pages 15-18 present basic data on the application of the electro-spark hardening method at the Kirovskiy Zavod (Kirov Plant) in Leningrad, at GAZ (Gor'kiy Automobile Plant imeni Molotov), Uralmashzavod (Ural Heavy Machinery Plant) and Uralvagonzavod (Ural Railroad-car Plant). The new electro-spark hardening machines EAI-1 single-electrode), IYe-2, IYe-2M, IAS-2M (five-electrode) developed by TsNIITMASH during 1954-1957 are compared with the KEI-1 and the UPR-3M. Persons assisting the author in the TsNIITMASH laboratory experiments were: Senior Engineer V.P.Savukov, Foreman A.D.Bondarev, Candidate of Technical Sciences S.S.Astaf'ev, Engineer V.V.Borisova, and Foreman A.S.Yeremin. The bibliography lists 48 references, all of them Soviet.

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AVAILABLE: Library of Congress

Card 7/7

VK/vm
27 June 1958

IVANOV, G.P., inzhener.

Speed reducer for the idle run of a welding transformer. Rech. transp. 16 no.3:26-28 Mr '57. (MLRA 10:4)
(Electric welding--Equipment and supplies)
(Electric transformers--Attachments)

IVANOV, G.P.

Theory of the breaking of notched specimens. Trudy LPI no.191: 98-109 '57. (MIRA 11:9)
(Metals--Testing)

Ivanov, G. P.

25(1) PHASE I BOOK EXPLOITATION SOV/1891

Tsentral'nyy nauchno-issledovatel'skiy institut tekhnologii i mashinostroyeniya

Elektrotermicheskaya obrabotka i elektroiskrovoye uprochneniye detaley; [sbornik] (Electric Heat Treatment and Electrospark Hardening of Parts; Collection of Articles) Moscow, Mashgiz, 1958. 214 p. (Series: Its: [Trudy] kn. 89) Errata slip inserted. 5,600 copies printed.

Ed.: L.Yu. Miloslavskiy, Engineer (Deceased); Ed. of Publishing House: L. Ya. Galler; Tech. Ed.: A. F. Uvarova; Managing Ed. for Literature on General Technical and Transport Machine Building (Mashgiz): K.A. Ponomareva, Engineer.

PURPOSE: This collection of articles is intended for engineering staffs of plants and scientific research institutes dealing with electric heating, electric heat-treatment, and electrospark hardening of metals.

COVERAGE: This collection of articles presents the results of scientific research work carried out by the Department of TsNIITMash (Central Scientific Research Institute of Technology and Machinery) on electric heating in the field of high

and industrial-frequency heating and electrospark hardening of machine parts. The process of surface hardening, through hardening and tempering of steel and cast iron using induction-heating and electrospark methods, and the results of investigation of the effects of electric-heat treatment and electrospark hardening on the properties of steel and cast iron are described. A brief review of industrial applications of induction heating outside the Soviet Union are also presented. Various electric-heating and electrospark hardening equipment developed by TsNIITMash are described. The book was written for the 20th anniversary of the scientific research work of TsNIITMash, Department of Electric Heating.

water by oil, and by other milder cooling agents, and the effect of the duration and the temperature of annealing are also discussed.

Lagerkvist, S.A., Engineer, Low-voltage Equipment for Industrial Frequency Induction Heating 170

The author discusses various types of inductors, including flexible ones, for sectional heating of large parts using 50 cycles and up to 50 volts current. The simplicity of the construction of such inductors is indicated.

Ivanov, G.P., Candidate of Technical Sciences. Structure, Hardness, and Depth of a Layer Hardened by the Electrospark Method 188

The author discusses the mechanism of the electrospark hardening process and the effect of the current used and hardening time on the structure and depth of the layer. The dependence of hardness on the processing regimes and on the carbon content in processed steel is discussed and results of analysis of the structure are given. The author states that methods for mechanization of this process are now being developed.

Astaf'yev, S. S., Candidate of Technical Sciences. Electrospark Equipment Developed by TsNIITMash 204

The author describes construction of two apparatus, the IAS-2M and IAS-3M developed by TsNIITMash for electrospark hardening of steel surfaces. Technical specifications for both are given, and directions for operating the machines and results that can be obtained with them are included.

3

IVANOV GP

ABRAMOVICH, I.I., prof., ANBINDER, A.G., inzh., ANTOSHIN, Ye.V., inzh., ARKHANGEL'SKIY, L.A., inzh., ASTAF'YEV, S.S., kand. tekhn. nauk, AFANAS'YEV, L.A., inzh., BARGSHTEYN, I.I., inzh., BORISOV, Yu. S., inzh., red., BYALYY, I.L., inzh., VETVITSKIY, A.M., inzh., GERSHMAN, D.Kh., inzh., GINZBURG, Z.M., inzh., GOROSHKIN, A.K., inzh., YEVDOKIMCHIK, Kh.I., inzh., ZHIKH, V.A., kand. tekhn. nauk, ZABYVAYEV, Ye. I., kand. tekhn. nauk, [deceased], ZOBIN, V.S., inzh., IVANOV, G.P., kand. tekhn nauk, KAPRANOV, P.N., inzh., KONDRATOVICH, V.M., inzh., KOSTEREV, S.K., inzh., KOVAL'SKIY, N.N., inzh., KRUGLYAK, L.A., inzh., LUKYANOV, T.P., inzh., LAPIDUS, A.S., kand. tekhn. nauk, LIVSHITS, G.A., kand. tekhn. nauk, LISHANSKIY, I.M., inzh., MIGALINA, Ye.Ya., inzh., NOSKIN, R.A., kand. tekhn. nauk; ., PRONIKOV, A.S., doktor tekhn. nauk, REGIRER, Z.L., kand. tekhn. nauk, RUDYK, M.A., inzh., SOKOLOVA, N.V., inzh., SAKLINSKIY, V.V., inzh., SAKHAROV, V.P., inzh., TOKAR', M.KH., inzh., TKACHEVSKIY, G.I., inzh., KHRUNICHEV, Yu.A., kand. tekhn. nauk, TSOPIN, K.G., inzh., red.; SHEYNGOL'D, Ye. M., inzh., SOKOLOVA, T.F., tekhn. red.

[Handbook for machinists of machinery plants in two volumes] Spravochnik mekhanika mashinostroitel'nogo zavoda v dvukh tomakh. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry. Vol. 2. [The technology of repair work] Tekhnologiia remonta. Otv. red. toma IU. S. Borisov, 1958. 1059 p. (MIRA 11:10)

(Machinery--Maintenance and repair)
(Machine-shop practice)

IVANOV, G.P., Cand Tech Sci — (diss) "Study of the static strength of ~~patterns~~ shafts with deep ~~incisions~~ cuts." Len, 1958, 13 pp (Min of Higher ~~E~~ducation USSR. Len Polytechnic Inst im M.I. Kalinin) 150 copies (KL, 50-58, 124)

S/708/59/000/002/001/008
D221/D304

AUTHOR: Ivanov, G.P., Engineer

TITLE: On the importance of scale factor in undercut components

SOURCE: Izhevsk. Mekhanicheskiy Institut. Voprosy tochnosti metallorezhushchikh stankov i mekhanicheskoy obrabotki, no. 2, 1959, 30 - 34

TEXT: The author discussed the problems connected with the law governing the fall of the curve of strength in the case of deep undercutting and the effect of misalignment, as well as the importance of the scale factor. Casting of low temperature melting alloys proved to be the most reliable method of producing deep and sharp undercuttings. The desired groove was obtained by placing at the junction of the steel half-moulds an insert which had a graphite deposit to eliminate metal adherence. Specimens were tested without being removed from the mould. The loading was ensured by water in a container attached to the mould. The container was weighed after the fai-

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On the importance of scale factor ...

lure of the specimen, to determine the ultimate stress. The undercut specimens were made in tin, lead, BOC 40 (POS 40) alloy and B 83 (B83) babbitt. The plotted results demonstrate that the strength in the undercut σ_u, increases with the reduction of the diameter of the groove, although the stability of the results decreases essentially in some metals. Other specimens with different dimensions were also tested, and the strength had markedly altered in a similar pattern as before. The data are tabulated. It is concluded that the scale factor is decisive in the increase of strength of deeply undercut specimens. This is stated to confirm the hypothesis of T.A. Lebedev, N.N. Davidenkov (Dinamicheskiye ispytaniya metallov (Dynamical Testing of Metals), ONTI, 1936) is mentioned for his contributions in the field. There are 5 figures, 2 tables and 5 Soviet-bloc references.

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SOV/122-59-3-40/42

AUTHOR: Ivanov, G.P.

TITLE: Investigation of the Static Strength of Specimens with Deep Notches (Issledovaniye Staticheskoy Prochnosti Obraztsov S Glubokimi Nadrezami)

PERIODICAL: Vestnik Mashinostroyeniya, 1959, Nr 3, p 88 (USSR)

ABSTRACT: Author's summary of a dissertation, submitted to the Leningrad Polytechnic Institute (Leningradskiy Politekhnicheskiy Institut) Imeni M.I. Kalinin, for the attainment of the Degree of Candidate of Technical Sciences.
The static strength in tension of specimens with a specially deep and sharp notch was examined. The causes of the deviation of the experimental curve of the failure stress from the theoretical curves derived on the basis of the analytical investigations of G. Neuber has been considered. An evaluation is given for the scale factor in testing of specimens with deep circular notches. The effect of several properties of the notch profile upon the test results has been investigated.

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Investigation of the Static Strength of Specimens with Deep Notches

Based on experimental results and theoretical generalisations, conclusions are derived on the physical nature of the scale factor and its effect on the strength under different conditions of conducting the tests and after different heat treatments of the metal.

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IVANOV, G.P., kand.tekhn.nauk

Structure, hardness and depth of the layer hardened by the electric spark method. [Trudy] TSNIITMASH 89:188-203 '59. (MIRA 12:4)
(Steel--Metallography) (Case hardening)

S/125/60/000/05/05/015

AUTHORS: Pachentsev, Yu. A.; Tishura, V. I.; Ivanov, G. P.

TITLE: Small Tongs for Resistance Spot Welding

PERIODICAL: Avtomaticheskaya svarka, 1960, No. 5, pp. 32-37

TEXT: Three new types of small-size welding "tongs" are described - "K-165", "K-180", and "K-171", of about 20 kg weight, designed for spot welding of steel parts with total thickness of up to 4-5 mm. The "K-165", and "K-180" Figures 1 and 2 weld 120-140 spots per minute, have a pneumatic drive and are meant for large assembly shops with conveyer lines. The "K-171" (Fig. 3) with manual drive is for shops having no compressors. The "K-165" has a built-in transformer (Fig. 4). The electrodes of all three types are water cooled. A special flexible cable, "KGPE" of "Ukrkabel'" works is used for the feed of electric current, compressed air and water. It comprises three electric cores with 10 mm^2 cross section and one 2.5 mm^2 core, and three ducts for water and air; one of the 10 mm^2 cores is connected to the housing for grounding. The entire welding unit with "tongs" suspended on a spring balancer is shown in Figure 6. Welding is possible in any position. The article includes

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Small Tongs for Resistance Spot Welding

details of design and operation. The experimental works of the Electric Welding Institute produced the first lot of "K-165" in 1959, and series production will begin in 1960. The first "K-171" and "K-180" trial units will be produced during 1960. In future, the Institute will develop "tongs" of different power for special welding purposes. There are 3 photographs, 3 diagrams, and 1 Soviet reference.

ASSOCIATION: Institut elektrosvarki im. Ye. O. Patona AN USSR (Electric Welding Institute imeni Ye. O. Paton AS UkrSSR)

SUBMITTED: January 8, 1960